

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-007371**Date Inspected:** 05-Jun-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Fabrication**Summary of Items Observed:**

CWI Inspector: Mr. Liu Fa Wen

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. The QA Inspector observed the following:

Prior to Caltrans QA Inspectors' concurring with issuance of OBG deck plate closed rib green tag releases a review of the ultrasonic inspection database is performed to verify all closed rib tack weld repair locations have been ultrasonically accepted. Today this QA Inspector, Mr. Paul Dawson, performed data entry of ultrasonic inspection information from the field generated Ultrasonic inspection data sheets onto the common drive computer database for the following OBG deck panels: DP122-001, DP122-002, DP149-001, DP153-001, DP176-001, DP230-001, DP263-001, DP338-001, DP423-001, DP425-001, DP473-001 and DP477-001.

OBG Bay 13

The QA Inspector observed ZPMC welder Mr. Zhao Jibo, stencil 055564 is using flux cored welding procedure WPS-B-T-4133 to make various welds between plates EP62A and CA47. The QA Inspector observed a welding current of approximately 250 amps and 29.3 volts. Items observed on this date appeared to generally comply with applicable contract documents.

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The QA Inspector observed ZPMC welder Mr. Shi Jiabao, stencil 068494 is using flux cored welding procedure WPS-B-T-4133 to make weld CSD-PP61.5-7 through 14. The QA Inspector observed one worker using a torch to preheat the base material and Mr. Jiabao has a welding current of approximately 260 amps and 28.0 volts. Items observed on this date appeared to generally comply with applicable contract documents.

The QA Inspector observed ZPMC welder Mr. Zhu Bensheng, stencil 068047 is using flux cored welding procedure WPS-B-T-2132 to make weld SEG064B-014 on floor beam FB016A. The QA Inspector observed one worker using a torch to preheat the base material and Mr. Bensheng is using a welding current of approximately 260 amps and 28.0 volts. Items observed on this date appeared to generally comply with applicable contract documents.

The QA Inspector observed ZPMC welder Mr. Wu Wanyong, stencil 050242 is using flux cored welding procedure WPS-B-T-2132 to make weld SSD5A-PP61-105. The QA Inspector observed a welding current of approximately 290 amps and 29.5 volts. Items observed on this date appeared to generally comply with applicable contract documents.

The QA Inspector observed ZPMC welder Mr. Wei Yingchong, stencil 048043 is using welding specification WPS-B-T-2133 to complete shielded metal arc tack weld DP093-001-070 between a diaphragm plate and deck plate DP093-001. The QA Inspector observed that the base material where the tack weld was made had been preheated with a torch and a ZPMC QC Inspector is monitoring this welding. The QA Inspector measured a welding current of approximately 150 amps. The QA Inspector observed the electrode storage container that is being used by Mr. Yingchong was not connected to any electric power supply and the electrodes inside the oven appear to be approximately 45 degrees Celsius. The QA Inspector informed ZPMC CWI Mr. Liu Fa Wen that the electrode storage container is not connected to any electric power and Mr. Liu Fa Wen had Mr. Yingchong connect the electrical leads on the electrode storage container. Approximately two hours later the QA Inspector observed the electrode storage container was not connected to any electrical power supply and the welding electrodes appear to be very close to an ambient temperature. The QA Inspector informed ZPMC CWI Mr. Liu Fa Wen who instructed Mr. Yingchong to discard the cold electrodes and obtain new electrodes from the rod storage oven. Items observed on this date do not appear to fully comply with applicable contract documents.

The QA Inspector observed ZPMC welder Ms. Duan Ziuzhi, stencil 050502 using submerged arc welding procedure specification WPS-B-T-2221-B-L2C-S-2 to make groove weld SEG044-001. The QA Inspector observed Quality Control personnel monitoring the base material temperature and other welding attributes. This QA Inspector observed QC personnel have measured a welding current of 590 amps, 32.0 volts and a welding travel speed of 515 mm per minute. Items observed on this date appeared to generally comply with applicable contract documents.

OBG Bay 4

The QA Inspector observed ZPMC welder Mr. Wei Yingchong, stencil 048043 is using welding specification WPS-B-T-2211-B-U2 to complete shielded metal arc tack weld SEG048*-006 between deck plates 310A and 337A. (Note: the * (asterisk) indicates this is a top plate.) The QA Inspector observed that the base material where the tack weld was made had been preheated with a torch and a ZPMC QC Inspector is monitoring this welding. The QA Inspector measured a welding current of approximately 150 amps. Items observed on this date appeared

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to generally comply with applicable contract documents.

Summary of Conversations:

See above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer
